

II. REMARKS

Claims 1, 3-24, and 26-69 are pending. The Applicants' attorney has amended claims 1, 6, 24, 34, and 46, and has cancelled claims 2 (claim 1 incorporates the subject matter of claim 2) and 25 (claim 24 incorporates the subject matter of claim 25). But the amendment to claim 6 does not narrow this claim. In light of the following, all of the claims are now in condition for allowance; therefore, the Applicants' attorney requests the Examiner to withdraw all of the outstanding objections and rejections.

Rejection of Claim 69 Under 35 U.S.C. § 102(b) As Being Anticipated By U.S. Patent 4,951,150 to Browning

As discussed below, the Applicants' attorney disagrees with this rejection.

Claim 69

Claim 69 recites changing the brightness of a first region of an image screen according to a first polarity with a first electromagnetic beam, and simultaneously changing the brightness of a second region of the image screen according to a second polarity with a second electromagnetic beam.

For example, referring to FIG. 2 of the patent application, an electromagnetic erase (first) beam 52 changes the brightness of a first region 44 of an image screen 34 according to an off (first) polarity, and an electromagnetic image (second) beam simultaneously changes the brightness of a second region 44 of the image screen according to an on (second) polarity.

In contrast, Browning fails to disclose simultaneously changing the brightness of two regions of an image screen according to respective first and second polarities with respective first and second electromagnetic beams. First, referring, e.g., to FIG. 18, lines 19-43 (this is the same portion of Browning on which the Examiner has based his rejection), although Browning discloses erasing a first imaging member (first image screen) 300 while writing an image to a second imaging member (second image screen) 301, Browning does not disclose simultaneously writing and erasing different regions of the same imaging member. Moreover, Browning erases the imaging member 300 by closing a

switch 380 to connect a back electrode of the member 300 to an erase voltage V_b , and, therefore, does not erase the imaging member with an electromagnetic beam.

Rejection of Claims 1-69 Under 35 U.S.C. § 103(a) As Being Unpatentable Over The Admitted Prior Art In FIG. 1 Of The Patent Application In View Of Browning

As discussed below, the Applicants' attorney disagrees with this rejection.

Claim 1

Claim 1 as amended recites a beam generator operable to direct an electromagnetic off-beam and an electromagnetic on-beam onto a region of a scan surface from a single side of a projection screen, the region of the scan surface perpendicularly aligned or substantially perpendicularly aligned with a region of a projection surface, the off- and on-beams narrower than a dimension of the projection screen at the scan surface, the off-beam operable to change the brightness of the region of the projection surface to a selected off-condition, and the on-beam operable to change the brightness of the region of the projection surface from the selected off-condition to a desired brightness level.

For example, referring to FIG. 2 of the patent application, an image (beam) generator 53 directs an electromagnetic erase (off) beam 52 and an electromagnetic image (on) beam 42 onto a region 44 of a scanning surface 38 from a single side of a projection screen 34, the region 44 of the scanning surface perpendicularly aligned or substantially perpendicularly aligned with a region of a projection surface 36 of the screen 34, the erase beam 52 changing the brightness of the region of the projection surface 36 to a selected off condition, and the image beam 42 changing the brightness of the region of the projection surface 36 from the selected off condition to a desired brightness level.

In contrast, the combination of the prior-art FIG. 1 and Browning does not suggest the claimed subject matter.

Referring to FIG. 1 of the patent application, unlike the claimed off beam, which is narrower than a dimension of the projection screen at the scan surface, the erase burst 40 is at least as wide as the scan surface 38.

Furthermore, referring, *e.g.*, to column 12, lines 28-36, although Browning discloses erase and write electron beams that are narrower than an imaging plate 54 (FIGS. 2 and 6), unlike the claimed beam generator, which directs off and on beams onto a single side of a projection screen, a first of Browning's embodiments requires that his erase and write beams be directed onto the imaging plate from different sides. Referring to FIGS. 2 and 6 and col. 8, line 19 – col. 9, line 16, Browning's system 10 generates an image on the image plate 54 by varying the degree of light scattering in regions of the image plate. The system 10 varies the degree of light scattering in a region by applying an electric field to the region. The polarity of the electric field determines whether the region becomes more transparent or more opalescent, and the strength of the electric field determines the level of transparency or opalescence. Specifically, if the electrode 56 is positive relative to the electrode 52, then the regions of the image plate 54 between the two electrodes become more transparent. Conversely, if the electrode 56 is negative relative to the electrode 52, then the regions of the image plate 54 between the two electrodes become more opalescent. Therefore, because the electrode 52 is grounded, one erases the image plate 54 (transparent state) by applying a positive voltage V_b to the electrode 56, and generates pixels (opalescent state) of an image by applying a negative voltage to the electrode 56 with an electron beam 36. Consequently, any electron beam incident on the electrode 56 will write an image because it will make the electrode 56 negative relative to the electrode 52. Therefore, the only way to erase an image with a second electron beam is by allowing the electrode 52 to float and directing a the second electron beam onto the electrode 52 from the side of the imaging plate 54 on which the electrode 52 is disposed. This second electron beam will erase the image plate 54 by making the electrode 52 negative relative to the electrode 56. Therefore, in this embodiment, Browning's write and erase electron beams must be incident from opposite sides of the imaging plate 54. If these beams are incident from the same side of the imaging plate 54, then they will both write or erase the imaging plate 54, but will be unable to do both.

And referring, *e.g.*, to FIGS. 3-6 and column 9, line 17 – column 10, line 54, although a second embodiment of Browning discloses erase and write electron beams that strike the imaging plate 54 (FIGS. 2 and 6) from the same side, unlike the claimed off and on beams, Browning's erase and write beams cannot both erase and write a region of the

image plate 54 that the beams strike, or a region of the image plate 54 that is aligned with an area that the beams strike. Referring to FIGS. 3 and 4, when an electron beam strikes a switching element 66, the element closes and couples an erase voltage on a conductive pattern 60 to a strip 64, thus erasing the portion of the image plate 54 that is perpendicularly aligned with the strip 64. Conversely, when an electron beam strikes the strip 64 directly, it writes, not erases, a region of the image plate 54 that is perpendicularly aligned with the region of the strip 64 that the beam strikes. That is, an electron beam that strikes a region of the plate 54 (or a region of the strip 64 that is aligned with the region of the plate 54) can only write that region, and cannot erase that region. Therefore, there is no region of the image plate 54 that can be both erased and written by an electron beam that directly strikes the region of the image plate or that strikes a portion of the strip 64 aligned with the region of the image plate 54.

Consequently, because Browning does not disclose or suggest erase and write beams that are directed toward a same side of a screen and that can respectively erase and write a region of the image plate 54 that the beams strike (or a region of the image plate 54 that is aligned with an area that the beams strike), there is no motivation to replace the erase burst 40 of FIG. 1 of the patent application with Browning's erase beam.

Claims 3-8, 58, and 59

These claims are patentable by virtue of their dependencies from claim 1.

Claim 9

Claim 9 recites a beam generator operable to direct first and second electromagnetic beams onto a region of a screen from a single side of the screen, the first and second beams being narrower than a dimension of the screen at the screen, the first beam operable to change the brightness of the region according to a first polarity and the second beam operable to change the brightness of the region according to a second polarity.

For example, referring to FIG. 2 of the patent application, an image (beam) generator 53 directs an electromagnetic erase (first) beam 52 and an electromagnetic image (second) beam 42 onto a region 44 of a projection screen 34 from a single side of the projection screen 34, the erase beam 52 changing the brightness of the region 44

according to a first polarity and the image beam 42 changing the brightness of the region 44 according to a second polarity.

In contrast, the combination of the prior-art FIG. 1 and Browning does not suggest the claimed subject matter.

Referring to FIG. 1 of the patent application, unlike the claimed off beam, which is narrower than a dimension of the projection screen at the scan surface, the erase burst 40 is at least as wide as the scan surface 38.

Furthermore, referring, *e.g.*, to Browning's column 12, lines 28-36, as discussed above in support of the patentability of claim 1, unlike the claimed beam generator, which directs off and on beams onto a region of a projection screen from a single side of the screen, a first of Browning's embodiments requires that his erase and write beams be directed onto an imaging plate 54 from different sides.

And referring, *e.g.*, to FIGS. 3-6 and column 9, line 17 – column 10, line 54, also as discussed above in support of the patentability of claim 1, unlike the claimed off and on beams, in a second of Browning's embodiments, Browning's electron beams cannot both erase and write a region of the image plate 54 that the beams strike.

Consequently, because Browning does not disclose or suggest erase and write beams that are directed toward a same side of a screen and that can respectively erase and write a region of the image plate 54 that the beams strike, there is no motivation to replace the erase burst 40 of FIG. 1 of the patent application with Browning's erase beam.

Claims 10-17 and 60

These claims are patentable by virtue of their dependencies from claim 9.

Claim 18

Claim 18 is patentable for reasons similar to those discussed above in support of the patentability of claim 9.

Claims 19-23 and 61

These claims are patentable by virtue of their dependencies from claim 18.

Claim 24

Claim 24 is patentable for reasons similar to those discussed above in support of the patentability of claim 1.

Claims 26-27 and 62

These claims are patentable by virtue of their dependencies from claim 24.

Claim 28

Claim 28 is patentable for reasons similar to those discussed above in support of the patentability of claim 9.

Claims 29-33 and 63

These claims are patentable by virtue of their dependencies from claim 28.

Claim 34

Claim 34 as amended recites a beam generator operable to simultaneously direct an electromagnetic erase beam and an electromagnetic image beam onto a scan surface of a projection screen from a same side of the projection screen, the erase and image beams narrower than a dimension of the projection screen at the projection screen.

For example, referring to FIG. 2 of the patent application, an image (beam) generator 53 simultaneously directs an electromagnetic erase (first) beam 52 and an electromagnetic image (second) beam 42 onto a scan surface 38 of a projection screen 34 from a same side of the projection screen 34, the erase beam 52 and the image beam 42 narrower than a dimension of the projection screen at the projection screen.

In contrast, the combination of the prior-art FIG. 1 and Browning does not suggest the claimed subject matter.

Referring to FIG. 1 of the patent application, unlike the claimed erase beam, which is narrower than a dimension of the projection screen 34 at the projection screen, the erase burst 40 is at least as wide as the scan surface 38.

Furthermore, referring, *e.g.*, to FIGS. 3-4 and column 10, lines 15 - 54, Browning does not disclose or suggest simultaneously directing an erase beam and an image beam onto a scan surface. Browning discloses two erasing methods. According to the first

method, a electron beam is scanned vertically across the switch elements 66 to erase the entire image plate 54 before writing an image by scanning the beam horizontally. According to the second method, a beam is scanned horizontally from left to right. When the beam strikes a switch element 66, it causes the corresponding strip 64 to erase the portion of the image plate 54 that the strip covers. But then as the beam moves to the right away from the switch element 66, it writes pixels of an image on the regions of the image plate 54 that it strikes. Consequently, Browning does not disclose or suggest directing an electron erase beam onto the image plate 54 at the same time that it directs an electronic image beam onto the plate.

Therefore, because Browning neither discloses nor suggests simultaneously directing erase and image beams onto a scan surface of a projection screen, there is not motivation to combine Browning and prior-art FIG. 1 to arrive at the subject matter recited in claim 34.

Claims 35-36 and 64

These claims are patentable by virtue of their dependencies on claim 34.

Claim 37

This claim is patentable for reasons similar to those recited above in support of the patentability of claim 9.

Claims 38-42 and 65

These claims are patentable by virtue of their dependencies on claim 37.

Claim 43

This claim is patentable for reasons similar to those recited above in support of the patentability of claim 9.

Claims 44-45 and 66

These claims are patentable by virtue of their dependencies on claim 43.

Claim 46

This claim is patentable for reasons similar to those recited above in support of the patentability of claim 9.

Claims 47-57 and 67

These claims are patentable by virtue of their dependencies on claim 46.

Claims 68-69

These claims are patentable for reasons similar to those recited above in support of the patentability of claim 34.

Conclusion

In light of the foregoing, claims 3-5, 7-23, 26-33, 35-45, and 47-69 as previously pending and claims 1, 6, 24, 34, and 46 as amended are in condition for allowance, which is respectfully requested.

In the event additional fees are due as a result of this amendment, payment for those fees has been enclosed in the form of a check. Should further payment be required to cover such fees you are hereby authorized to charge such payment to Deposit Account No. 07-1897.

If, after considering this response, the Examiner does not believe that all of the claims are allowable, then he is requested to contact the Applicants' attorney, Bryan Santarelli, at (425) 455-5575 to schedule a telephone conference.

DATED this 08th day of December, 2005.

Respectfully Submitted,

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